IN THE CLAIMS:

Claims 1 – 70 (Cancelled)

71. (Currently Amended) A method for selecting a master switch from a ~~stack of switches comprising~~ plurality of switches in a stack, each switch in the stack having at least one stack port for communication with at least another one of the plurality of switches in the stack, the method comprising:

each switch in the stack communicating with at least one other switch in the stack via the at least one stack port thereof;

determining whether at least one of the plurality of switches in the stack is an OSI Layer 3 switch;

where at least one OSI Layer 3 switch is found in the stack, selecting ~~the master switch from the plurality of switches, responsive to the determining step by selecting~~ the OSI Layer 3 switch ~~with~~ having the lowest switch identification as the master switch of the stack; and

~~selecting the master switch from the plurality of switches responsive to the determining step find no OSI Layer 3 switches by selecting a~~ where no OSI Layer 3 switch if found in the stack, selecting the switch ~~with~~ having the lowest switch identification ~~number~~ as the master switch of the stack;

wherein the lowest switch identification is computed based on a unique Media Access Control address assigned to each switch in the stack, an Internet Protocol address assigned to each switch in the stack, a weight assigned to the stack port via which the switch is accessed, and a link cost assigned thereto.

72. (Currently Amended) A method according to claim 71, wherein responsive to the determining step finding no OSI Layer 3 switch in the stack, the method further comprising:

adding a new switch to the stack;

determining a modified topology ~~map by~~ resulting from the addition of the new switch to the stack; and

selecting the new switch as the master switch responsive to the new switch being an OSI Layer 3 switch ~~and no other switch on the network being an OSI Layer 3 switch~~.

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73. (Currently Amended) A method according to claim 71, wherein responsive to the determining step finding at least one OSI Layer 3 switch in the stack, the method further comprising:

adding a new switch to the stack;

determining a modified topology ~~map by~~ resulting from the addition of the new switch to the stack; and

selecting the new switch as the master switch responsive to the new switch being an OSI Layer 3 switch having the lowest switch identification ~~selected from a group consisting of the plurality of switches that are OSI Layer 3 switches~~ in the augmented stack.

74. (Currently Amended) A method according to claim 71, and further comprising:

joining together two partitions of the stack of switches into a combined stack;

determining whether at least one of the switches from either one of the two partitions of the stack of switches is an OSI Layer 3 switch;

~~selecting the master switch from the two partitions of stack of switches, responsive to the determining step by~~ where at least one OSI Layer 3 switch is found in the combined stack, selecting the OSI Layer 3 switch ~~with~~ having the lowest switch identification as the master switch of the combined stack; and

~~selecting the master switch from the two partitions of the stack of switches responsive to the determining step find no OSI Layer 3 switches by selecting a~~ where no OSI Layer 3 switch is found in the combined stack, selecting the switch ~~with~~ having the lowest switch identification. ~~number~~ as the master switch of the combined stack.

75. (Currently Amended) A method for distributed OSI Layer 3 packet processing for a stacked switch configuration having a plurality of switches, wherein at least two of the plurality of switches ~~is an~~ in the stack are OSI Layer 3 ~~switch~~ switches and at least one of the plurality of switches is an OSI Layer 2 switch, the method comprising:

assigning every OSI Layer 3 switch as a head router ~~for~~ to itself; ~~and~~

assigning to every OSI Layer 2 switch ~~to~~ as its head router the closest OSI Layer 3 switch ~~that is closest as a head router~~ thereto; and

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assigning a one of the at least two OSI Layer 3 switches as a master switch for stacked switch configuration;

wherein the closeness to an OSI Layer 3 switch is measured as the number of hops between the OSI Layer 2 switch and the OSI Layer 3 switch as determined from the topology of the stack.

76. (Currently Amended) A method according to claim 75, wherein at least two switches in the stack each have at least one external port for communication with network entities outside of the stack, the method further comprising:

receiving via an external port an ARP request ~~packet by~~ at an OSI Layer 3 switch that is not the master switch ~~from a non-~~ of the stack ~~port~~; and

sending a response to the ARP request ~~packet~~, the response having the MAC address of the OSI Layer 3 switch as a source MAC address.

77. (Currently Amended) A method according to claim 75, wherein at least two switches in the stack each have at least one external port for communication with network entities outside of the stack, the method further comprising:

receiving an ARP request ~~packet by a~~ at one of the OSI Layer 2 switches ~~from a non-stack~~ via an external port; and

sending a response to the ARP request ~~packet~~, the response having the MAC address of the ~~nearest~~ closest OSI Layer 3 switch as a source MAC address.

78. (Currently Amended) A method according to claim 75, wherein each switch in the stack has at least one stack port for communication with at least another one of the plurality of switches in the stack, at least two switches in the stack each having at least one external port for communication with network entities outside of the stack, the method further comprising:

receiving an ARP request bearing an address which cannot be resolved by any switch in the stack; and

~~sending an ARP request by a one of the plurality of switches, the sending step further comprising:~~

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broadcasting the ARP request via stack ports to all other each switch[[es]] in the stack;

wherein the other each switch[[es]] in the stack, are responsive to the broadcast, to sending a forwards the ARP request packet to their via the non-stack port[[s]] associated therewith, the ARP, the forwarded ARP request packet having as a route interface IP address as a the sender sender's IP address and as a MAC address of the head[[er]] router the sender is sender's MAC address.

79. (Currently Amended) A stacked switch system having a plurality of switches, at least two switches in the stack each having at least one external port for communication with network entities outside of the stack, each of the plurality of switches comprising:

at least one stack port for communication with at least another one of the plurality of switches in the stack;

means for maintaining a local switch database, the local switch database comprising the MAC address and external port identification associations of MAC addresses learned by the switch locally; and

means for maintaining a remote switch database, the remote switch database comprising the MAC address and switch node identification associations of addresses learned through another switch node in the stack.

80. (Currently Amended) A stacked switch system according to claim 79, each switch in the stack further comprising:

means for receiving via an external port a unicast packet with an unknown address not present in either one of the local switch database and the remote switch database; and

means for broadcasting the unicast packet to all via stack ports to all other switches in the stacked switch system responsive to the means for receiving.

81. (Currently Amended) A stacked switch system according to claim 80, further comprising:

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means for broadcasting ~~the~~ an address newly learned by a switch ~~node knowing the~~ ~~address of the unicast packet responsive to the means for broadcasting~~ in the stack to all other switches in the stack via stack ports.

82. (Currently Amended) A stacked switch system according to claim 81, the means for maintaining a remote switch database further comprising:

means for updating the remote switch database with the association between the broadcast address ~~of the unicast packet~~ and the switch node identification of the switch ~~node~~ ~~knowing~~broadcasting the newly learned address responsive to a broadcast received via a stack port.

83. (Currently Amended) A stacked switch system according to claim 79, further comprising:

means for maintaining a switch identification table containing the switch identification of ~~switching nodes~~ switches in the stacked switch system and corresponding stack ports ~~utilized~~ employed to reach corresponding ~~the switching nodes~~ switches in the stack.

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